

MAJOR INVESTIGATIONS AND EMERGENCY RESPONSE UNIT

INFORMATION RELEASE

Serious injury

Incident date	24 December 2016
Event	Light vehicle collides with mine entry gate
Location	Mount Arthur Coal Mine, Muswellbrook, NSW

Overview

A worker suffered serious injuries when his private vehicle left the road and collided with the mine entry gate. The vehicle was impaled on the gate. The worker suffered a broken ankle.

Photograph 1: Light vehicle impaled on mine entry gate



The mine

Mount Arthur Coal Pty Ltd, owned by BHP Billiton, operates the Mount Arthur coal mine, 5 km southwest of Muswellbrook, NSW. The large open cut mine uses a strip mining method to remove overburden and coal by shovel and excavators. The overburden and coal is transported by haul trucks to onsite processing and transport facilities. The mine is operated 24-hours a day, seven days a week. The mine produces coal for domestic and international energy sector customers.

The incident

The incident occurred at about 3.50 pm on Saturday, 24 December 2016.

The mine and access road experienced a storm on the day, with heavy rain and hail contributing to poor driving and road conditions.

The worker had completed his shift and left the site in his private vehicle, travelling with a co-worker. The workers reported that heavy rain and hail increased as they drove off-site. The bad weather resulted in poor visibility and slippery conditions on the sealed access road.

The worker lost control of his Mitsubishi Triton dual cab on the road surface as it travelled downhill toward the mine entry gate. The vehicle aquaplaned, and slid forward and sideways off the road onto the grass verge and sloping embankment. It continued to travel almost 60 m while the worker tried to gain control before it collided with the open gate. The gate speared the front of the vehicle, passing through the engine bay and cabin firewall into the driver's area.

Photograph 2: Section of steel gate and driver's cabin of private vehicle.



The gate travelled between the worker's legs and collided with the cushion of the bucket seat he was sitting on. The gate continued into the rear of the cabin, stopping at the backseat.

The impact and momentum caused the vehicle to roll onto the passenger side, crushing a road sign. The vehicle came to rest about 5 m past the entry gate's normal position.

The passenger was able to climb out of the overturned vehicle and other workers, who were leaving the mine, came to their assistance.

The driver was left sitting on the metal gate, with his leg trapped in the cabin.

The worker suffered serious injuries to his right ankle.

The mine's rescue team, NSW Ambulance, NSW Fire and Rescue, and NSW Police responded to the incident. The worker was freed and removed from the vehicle by NSW Fire and Rescue. Both workers were examined and treated by NSW Ambulance officers.

The worker was transported to the John Hunter Hospital in Newcastle, where he underwent surgery to his fractured ankle.

The investigation

A Mine Safety inspector responded to the incident and undertook a range of investigation activities.

The mine operator is cooperating with the investigation.

Safety observations

Motor vehicle incidents during poor and wet weather conditions are a well-known risk to the mining industry and the general public.

A similar incident in bad weather occurred in 1998 at the Lemington open cut mine in Lemington, NSW. A worker died when the vehicle he was driving collided with a partially closed swinging-type boom gate at the mine entry. At the time of the incident it was raining, with wind gusts over 50 km/hr. It was determined that the latch type gate retainer was inadequate and that the wind had partially closed the gate.

Mine operators should:

- consider site rules for mine and private vehicles entering and leaving the mine
- erect signs specifying speed and road conditions
- monitor, inspect and audit entry roads to ensure safe conditions
- identify hazards and evaluate collision risk that fixed roadside objects, such as signs, poles, culverts, fences and entry gates, may pose if a vehicle makes contact with the object
- identify and implement control measures using the hierarchy of controls
- consider modern roadside safety barriers and crash cushion systems to manage roadside hazards and to lessen the severity of a collision.

Note: the installation of any crash barrier is an attempt to reduce the incidence or severity of collisions with a roadside hazard. Before the decision to install a barrier is taken, it is necessary to investigate other methods of reducing the risk of collision with the hazard. If the hazard cannot be eliminated, substituted or re-engineered and the road alignment or road condition cannot be improved to reduce the incidence of vehicles leaving the road, then a crash barrier may be an appropriate control.

Driving in wet and slippery conditions can be very dangerous. Drivers should:

- drive according to the road conditions and at a safe speed
- reduce speed when visibility is poor
- stop in very heavy rain and wait for the rain to ease
- avoid large puddles, if possible
- drive more slowly to avoid aquaplaning and skidding
- avoid breaking suddenly, accelerating or turning quickly to reduce the chance of skidding
- avoid driving on roads covered with water (even partially covered)
- allow safe distances between vehicles.

Vehicles must be prepared and maintained to ensure safety when driving in wet conditions. Make sure your vehicle has:

- good tyre tread
- lights that work well
- windscreen and lights that are clean.

Mine operators are reminded of their duty to identify hazards and manage risks to health and safety in accordance with the provisions of the *Work Health and Safety Act 2011* and *Work Health and Safety (Mines and Petroleum Sites) Act 2013* (NSW) and Regulations.

Further information

Information on safe driving in bad weather is available at:

- NRMA: [Tips for driving in the rain](#), a webpage that provides practical tips for driving in the rain
- Transport for NSW: [Bad weather](#), a web page providing general guidance on driving in bad weather and poor conditions
- Queensland Government: [Road safety during wet weather](#), a webpage that provides practical tips on being prepared for general wet weather.

Information on road and weather conditions is available at:

- Transport for NSW: [Live Traffic NSW](#)
- Australian Government Bureau of Meteorology: [NSW weather and warnings summary](#)

About this information release

The Resources Regulator has issued this information to draw attention to the occurrence of a serious injury in the mining industry. Investigations are ongoing and further information may be published as it becomes available.

The information contained in this publication is based on knowledge and understanding at the time of writing. However, because of advances in knowledge, users are reminded of the need to ensure that the information upon which they rely is up to date and to check the currency of the information with the appropriate officer of the Department of Industry, Skills and Regional Development or the user's independent adviser. All photographs were produced under the Work Health and Safety Act 2011, powers of the regulator to obtain information.

Information about the Major Investigations and Emergency Response Unit and its publications can be found at: www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/major-investigations

For information about health and safety regulation for mine sites contact a mines inspector at one of our local offices: www.resourcesandenergy.nsw.gov.au/miners-and-explorers/safety-and-health/mine-safety-offices

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